

REMARKS

Claims 1, 3-10 and 12-18 are pending in this application. By this Amendment, claims 1, 3, 9, 10, 12, 13, 15, 17 and 18 are amended and claims 2 and 11 are canceled without prejudice or disclaimer to the subject matter therein. Support for the amendments to claims 1, 10 and 15 may be found at least at paragraphs [0011]-[0013] of the specification. Support for the amendments to claim 3 may be found at least at paragraphs [0024]-[0027] of the specification. No new matter is added by the above amendment. In view of at least the following, reconsideration and allowance are respectfully requested.

I. Interview Summary

Applicants appreciate the courtesies shown to Applicants' representatives by Examiner Mai in the November 14, 2007 personal interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

II. Specification Objection

The Office Action objects to the abstract for the use of an undefined acronym. This objection is respectfully traversed.

By this Amendment, the abstract is amended to define the acronym "FIR" as finite response filter.

Accordingly, withdrawal of the objection is respectfully requested.

II. Claim Rejection under 35 U.S.C. § 101

The Office Action rejects claims 1-16 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

By this Amendment, claims 2 and 11 are cancelled. Thus, the rejections as to claims 2 and 11 are moot.

Applicants respectfully submit that claims 1, 3-10 and 12-16 are adequately clear and directed to statutory subject matter. Specifically, independent claims 1, 10 and 15 disclose a practical application with a concrete, useful, and tangible result.

Accordingly, withdrawal of the rejections is respectfully requested.

III. Claim Rejection under 35 U.S.C. § 112

The Office Action rejects claims 3-4, 12-14 and 17-18 under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

By this Amendment, claim 3 is amended to recite, in part, "permitting k^d image data pixels used to generate first partial filtered results to be deleted if the k^d image data pixels are no longer needed to generate the complete filter outputs, the k^d image data pixels being deleted, where $k^d:1$ is a sub-sampling ratio and d is a dimension of the filter." Thus, Applicants respectfully submit that amended claim 3 is adequately descriptive.

By this Amendment, claims 12, 13, 17 and 18 are amended to correct dependencies.

Accordingly, withdrawal of the rejections is respectfully requested.

IV. Claim Rejection under 35 U.S.C. § 102

The Office Action rejects claims 1 and 10 under 35 U.S.C. § 102(b) over U.S. Patent No. 6,243,729 (Staszewski).¹ This rejection is respectfully traversed.

It is well settled that a claim is anticipated only if each and every element set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See MPEP § 2131. Despite the Office Action's assertions, Staszewski does not teach each and every feature presently recited in claims 1 and 10.

¹ Applicants note that the Office Action does not clearly indicate whether the applied reference Staszewski refers to U.S. Patent No. 6,243,729 or U.S. Patent Application Publication No. 2002/0152250. Thus, for purposes of responding to the current § 102 and § 103 rejections, Applicants assume that the applied reference Staszewski corresponds to U.S. Patent No. 6,243,729.

Independent claim 1 recites, in part, "providing a filter that has at least two dimensions, wherein the at least two dimensions have $N \times N$ coefficients, and the at least two dimensions include a first dimension and a second dimension; providing zero padding if N is an odd number, wherein the first dimension is padded with a row of zeroes and the second dimension is padded with a column of zeroes; dividing the coefficients of the filter into a plurality of partial portions that correspond to a plurality of partial filters" (emphasis added).

Similarly, independent claim 10 recites, in part, " a first memory storing a filter that has at least two dimensions, wherein the at least two dimensions have $N \times N$ coefficients, and the at least two dimensions include a first dimension and a second dimension; a zero padding device that zero pads the filter if N is an odd number, wherein the zero padding device pads the first dimension with a row of zeroes, and the zero padding device pads the second dimension with a column of zeroes" (emphasis added).

Staszewski fails to teach, disclose or suggest the above-quoted features recited in claims 1 and 10. Thus, Staszewski fails to disclose each and every element recited in claims 1 and 10.

Accordingly, withdrawal of the rejections is respectfully requested.

V. Claim Rejections under 35 U.S.C. § 103

The Office Action rejects claims 2-9 and 11-17 under 35 U.S.C. § 103(a) over U.S. Staszewski; and rejects claims 1-17 under 35 U.S.C. § 103(a) over U.S. Patent No. 5,117,385 (Gee). These rejections are respectfully traversed.

By this Amendment, claims 2 and 11 are cancelled. Thus, the rejections as to claims 2 and 11 are moot.

It is well settled that in determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would

have been obvious, but whether the claimed invention as a whole would have been obvious.

See MPEP § 2141.02.

To establish a prima facie case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation to modify the reference or to combine reference teachings; (2) there must be reasonable expectation of success; and (3) the prior art reference must teach or suggest all the claim limitations. See MPEP § 2142.

As discussed above, independent claim 1 recites, in part, "providing a filter that has at least two dimensions, wherein the at least two dimensions have $N \times N$ coefficients, and the at least two dimensions include a first dimension and a second dimension; providing zero padding if N is an odd number, wherein the first dimension is padded with a row of zeroes and the second dimension is padded with a column of zeroes; dividing the coefficients of the filter into a plurality of partial portions that correspond to a plurality of partial filters" (emphasis added).

Similarly, independent claim 10 recites, in part, "a first memory storing a filter that has at least two dimensions, wherein the at least two dimensions have $N \times N$ coefficients, and the at least two dimensions include a first dimension and a second dimension; a zero padding device that zero pads the filter if N is an odd number, wherein the zero padding device pads the first dimension with a row of zeroes, and the zero padding device pads the second dimension with a column of zeroes" (emphasis added).

Moreover, independent claim 15 recites, in part, "means for zero padding a filter that has at least two dimensions, wherein the at least to dimensions have $N \times N$ coefficients, and the at least two dimensions include a first dimension and a second dimension, the means for zero padding pads the filter if N is an odd number, wherein the means for zero padding pads the first dimension with a row of zeroes, and the means for zero padding pads the second dimension with a column of zeroes; means for dividing the coefficients of the filter into a

plurality of partial portions that correspond to a plurality of partial filters; means for partial filtering image data to generate partial filtered results based on the partial portions of the coefficients" (emphasis added).

Staszewski and Gee, either individually or in combination, do not teach, disclose or suggest the padding of a row and/or column or a multi-dimensional filter (i.e., a matrix) with zeroes. Therefore, Staszewski and Gee, either individually or in combination, do not teach, disclose or suggest the subject matter recited in claims 1, 10 and 15.

Consequently, because the applied references, either individually or in combination, fail to teach or suggest all the claim limitations, the applied references fail to establish a prima facie case of obviousness with which to reject at least independent claims 1, 10 and 15.

Claims 3-9, 12-14 and 16-18 variously depend from claims 1, 10 and 15. Because the applied references, in any combination, fail to render the subject matter of independent claims 1, 10 and 15 obvious, dependent claims 3-9, 12-14 and 16-1 are patentable for at least the reasons that claims 1, 10 and 15 are patentable, as well as for the additional features they recite.

Accordingly, withdrawal of the rejections is respectfully requested.

VI. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Substitute Abstract

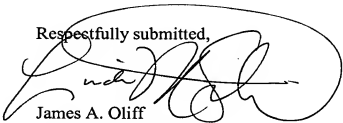
Date: November 26, 2007

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Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'James A. Oliff', is enclosed within a large, hand-drawn oval.

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JAO:DQS/jnm

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